

coaxial with the bearing surfaces 123, 125. A certain amount of lateral offset is necessary, however, in order to provide sufficient clearance for a tool to install the fasteners. It will also be noted that in FIG. 1 the apertures 119 are preferably provided so that fasteners can anchor the clip 100 to the first member 102 at locations

5 substantially aligned with the center of the arms 122, 124, to best counteract the loading forces transmitted during deflection.

A useful feature of the clip 100 is an indicia 141 shown in hidden lines which designates the nominal position for an operator to install the retainer, such as screw 138. The indicia can be a mark, such as the opposing arrows shown, imprinted,

10 embossed or stamped, or the like, into the material. FIG. 1A is an enlarged detail view of a portion of the slotted opening 140 illustrating an alternative embodiment wherein the indicia comprises a pair of shaker tabs (or tearaway tabs) 143 that can be provided within the slotted opening 140 to designate the nominal position for the retainer. The shaker tabs 143 are broken away by the retainer during the first

15 deflection, without impairing the sliding engagement function of the slip joint.

Another important advantage of the clip 100 of FIG. 1 is that it comprises a characteristic unitary construction; that is, it is formed out of a single piece of material. This can reduce cost by simplifying the component complexity.

FIG. 6 is an isometric view of a clip 100A constructed in accordance with an

20 alternative embodiment of the present invention, offering a relatively simpler unitary construction. Although not shown, a skilled artisan will recognize the manner in which the clip 100A and alternative embodiments hereinbelow join structural members in a slip joint similar to that shown in FIG. 1 and described hereinabove. The clip 100A has a base 114A comprising a first surface 116A and an opposing

25 second surface 118A. The clip 100A further comprises a guide 120A depending from the base 114A, the guide 120A comprising a first arm 122A extending along a longitudinal axis substantially transverse to the base plate 114A from a proximal end adjacent the second surface 118A. The guide 120A further comprises a second arm 124A extending away from the base 114A oriented in the same direction as the first

arm 122A defining a channel 126A between the arms 122A, 124A. The clip 100A is attachable to the horizontal framing member (not shown but as in FIG. 1) such as by fasteners passing through the apertures 119A in the base 114A. The guide 120A receivingly engages the vertical member (not shown but as in FIG. 1) in a characteristic operative sliding relationship. FIG. 7 is an elevational view of the clip 100A illustrating an advantageous arrangement of offsetting the apertures 119A symmetrically around the channel 126A in order to further minimize the moments acting on the framing members during deflection.

FIG. 8 is an isometric view of a clip 100B constructed in accordance with an alternative embodiment of the present invention, offering an illustrative construction comprising an assembly of discrete components. The clip 100B has a base 114B comprising a first surface 116B and an opposing second surface 118B. The clip 100B further comprises a guide 120B depending from the base 114B, the guide 120B comprising a first arm 122B extending along a longitudinal axis substantially transverse to the base plate 114B from a proximal end adjacent the second surface 118B. The guide 120B further comprises a second arm 124B extending away from the base 114B oriented in the same direction as the first arm 122B defining a channel 126B between the arms 122B, 124B. The clip 100B is attachable to the horizontal framing member (not shown but as in FIG. 1) such as by fasteners passing through the apertures 119B in the base 114B. The guide 120B receivingly engages the vertical member (not shown but as in FIG. 1) in a characteristic operative sliding relationship. FIG. 9 is a cross sectional view of the clip 100B, illustrating how in the same manner of clip 100A of FIGS. 6 and 7, the apertures 119B can be disposed symmetrically around the channel 126B to minimize moments imparted to the framing members during deflection.

FIG. 10 is an isometric view of a clip 100C constructed in accordance with an alternative embodiment of the present invention, offering a construction permitting the clip 100C to be installed to the medial portion of the vertical framing member (not shown but as in FIG. 1). The clip 100C has a base 114C (partially removed for

clarity) comprising a first surface 116C and an opposing second surface 118C. The clip 100C further comprises a guide 120C depending from the base 114C, the guide 120C comprising a first arm 122C extending along a longitudinal axis substantially transverse to the base plate 114C from a proximal end adjacent the second surface 118C. The guide 120C further comprises a second arm 124C extending away from the base 114C oriented in the same direction as the first arm 122C defining a channel 126C between the arms 122C, 124C. The clip 100C is attachable to the horizontal framing member (not shown but as in FIG. 1) such as by fasteners passing through the apertures 119C in the base 114C. The guide 120C receivingly engages the vertical member (not shown but as in FIG. 1) in a characteristic operative sliding relationship. Unlike the previous embodiments, however, the arm 122C is operatively slidingly engageable against the second member web (not shown) and the arms 124C are operatively slidingly engageable against the second member flanges (not shown but as in FIG. 1).

FIG. 11 is a cross sectional view of the clip 100C guide portion 120C slidingly engaging the vertical member web 128. The first arm 122C can be shaped to narrow the gap 126C so as to compressingly engage against the web 128 to provide a desired frictional resistance to the characteristic sliding engagement. For example, the first arm 122C of FIG. 11 has an angled portion 140 and an angled portion 142 extending outwardly from the bearing surface 123C to the arms 124C. Alternatively, the guide 120C' of FIG. 12 has a first arm 122C' defining more than one bearing surface 123C', in opposition to the bearing surfaces 125C of the opposing arms 124C'. In both cases it will be noted that the length of the arms 124C are substantially longer than the flanges 130 they fit over. This permits use of a particular clip 100C with a number of studs 104 which might vary in size due to manufacturing tolerances. This can also advantageously permit use of a particular clip 100C with different types of studs 104, such as with both a drywall stud and a structural stud.

FIGS. 13 and 14 illustrate an advantageous method of attaching the clip 100C to the vertical member 104. In FIG. 13 one of the second arms 124C is engaged with